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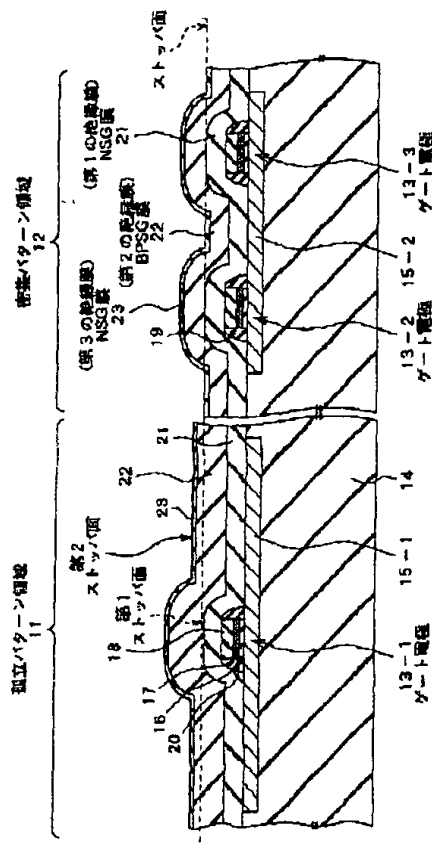
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TITLE : FLATTENING OF LAYER INSULATING
FILM



ABSTRACT : PROBLEM TO BE SOLVED: To secure a sufficient wiring formation reliability by eliminating steep steps in a process of flattening a layer insulating film based on chemical-mechanical polishing with use of a 2-layer stopper.

SOLUTION: A nondoped glass(NSG) film 21 of a low polishing rate is formed to cover a step pattern of gate electrodes 13-1 to 13-3 formed on a silicon-on- insulator(SOI) layer 15-1, 15-2. Further formed on a borophosphosilicate glass(BPSG) film 22 of a high polishing rate, on which an NSG film 23 of a low polishing rate is formed. In this case, the thicknesses of the NSG, BPSG and NSG films 21, 22 and 23 are set so that the highest level surface of the NSG film 21 in a dense pattern region 12 becomes nearly the same as the lowest level surface of the NSG film 23. The laminate is then entirely flattened by the CMP. Therefore, after the CMP process, there remains no steep step in the dense pattern region 12.

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